

**REMARKS**

**Substitute Specification**

Attached hereto are two substitute specifications, which are in compliance with 37 C.F.R. § 1.52 (a), C.F.R. § 1.52 (b), and C.F.R. § 1.25. One is marked to show changes made, while the other is a clean copy. The substitute specifications contain no new matter.

**Rejections Based on 35 U.S.C. § 112**

Claims 11 and 20-22 stand rejected as allegedly being indefinite. Applicants submit that the amendments made to claims 11 and 20-22 render these rejections moot.

Claims 1-25 stand rejected as allegedly being indefinite. Applicants respectfully disagree because they believe that this term is absolutely clear and that the skilled man is fully aware of the meaning of "*molecular weight*", i.e. it is the sum of the weight of the atoms of the polymer. To further clarify this, in claim 1, the term was amended to "*average molecular weight*". In light of this amendment, reconsideration and withdrawal of this rejection is requested.

**Rejections Based on 35 U.S.C. § 103**

Claims 1-25 stand rejected as allegedly being obvious over Huovinen et al., (U.S. 6,503,993); Pitkanen et al., (U.S. 6,342,564); or Govoni et al., (U.S. 5,610,244). Applicants respectfully disagree.

- Huovinen et al.

Huovinen relates to efficiently nucleated homo- and copolymers and a process for such compositions. In column 8 it is described that the polymerization reactor system in the preparation of the propylene homo- or copolymers may comprise one conventional stirred-tank slurry reactor and at least one gas phase reactor.

The difference between the teaching of Huovinen and the present invention is that in the inventive process in the first gas phase reactor a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix. Huovinen is totally silent about this feature. The Office has pointed to example 8 of Huovinen in which it is stated that the molecular weight of the fraction produced in a first and second loop reactor (which is different to the gas phase reactors of the present invention) can be controlled by adjusting the amount of hydrogen fed into the loop reactors. However, molecular weight is a totally different physical property than the ratio of two components in the overall composition.

The specific combination of a propylene rich ethylene propylene rubber (EPR) produced in the propylene polymer matrix in the first gas phase reactor and an ethylene rich EPR rubber produced in the propylene polymer matrix in the second gas phase reactor leads to a polymer having more stiffness/hardness to the surface which improves the resistance to scratch damage. This effect can clearly be taken from the examples 1-5 of the present invention. Scratch evaluation was carried out by measuring the DeltaL (dL) value by means of a spectrophotometer, wherein  $\Delta L > 4$  means "strong visibility of scratch" and  $\Delta L < 1$  means "significant lower visibility of scratch". By using the inventive process, polymer materials can be obtained which have a dL value of less than 4 and thus, polymers with an improved scratch resistance can be obtained.

Therefore, Huovinen does not teach, suggest or lead the skilled person to the unexpected and surprising result obtained using the currently claimed subject matter, *i.e.*, the process as claimed, using certain specific ethylene/propylene ratios affords a polymer with improved scratch resistance. Thus, Huovinen does not make the currently pending claims obvious.

- Pitkanen et al

Pitkanen does not cure the deficiencies of Huovinen. Pitkanen describes heterophasic propylene copolymers and a process for their preparation. It is described that in the

production of the polypropylene copolymer matrix one slurry reactor and then two gas phase reactors may be used (cf. column 3, lines 54-60). It is further mentioned that hydrogen may be added into either or both of the slurry phase or gas phase to control the molecular weight of the polymers of Pitkanen.

Thus, the same comments as above apply here. Pitkanen is totally silent with respect to a process in which in the first gas phase reactor a propylene rich ethylene propylene rubber (EPR) is produced in the propylene polymer matrix, and in the second gas phase reactor, an ethylene rich EPR rubber is produced in the propylene polymer matrix and that the resulting rubber has an improved scratch resistance.

Therefore, Pitkanen does not teach, suggest or lead the skilled person to the unexpected and surprising result obtained using the currently claimed subject matter, *i.e.*, the process as claimed, using certain specific ethylene/propylene ratios affords a polymer with improved scratch resistance. Thus, Pitkanen does not make the currently pending claims obvious.

- Govoni et al.

Govoni does not cure the deficiencies of Huovinen or Pitkanen either alone, or in combination. Govoni describes a process for the gas phase polymerization of olefins. The process may be carried out in one loop reactor and two gas phase reactors. It is also mentioned that molecular weight regulators may be used in the process to control the molecular weight.

However, in line with the argumentation with respect to Huovinen and Pitkanen, molecular weight is not the feature which is decisive in the process of the present invention but the ratio of ethylene/propylene in the first and second gas phase reactors. Govoni is totally silent with respect to this feature and the fact that a rubber with an improved scratch resistance may be obtained using the inventive process and the inventive process conditions.

Therefore, Govoni does not teach, suggest or lead the skilled person to the unexpected and surprising result obtained using the currently claimed subject matter, *i.e.*, the process as claimed, using certain specific ethylene/propylene ratios affords a polymer with improved scratch resistance. Thus, Govoni does not make the currently pending claims obvious.

Applicants further submit that each of the above mentioned references, either alone or in combination, do not make the currently pending claims obvious. Thus, they respectfully request the reconsideration and withdrawal of this rejection.

**CONCLUSION**

Applicants respectfully contend that all requirements of patentability have been met. Allowance of the claims and passage of the case to issue are therefore respectfully solicited.

Should the Examiner believe a discussion of this matter would be helpful, he is invited to telephone the undersigned at (312) 913-2114.

Respectfully submitted,

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